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| <b>Churchill Coatings of Maine, LLC</b> | ) | <b>Departmental</b>               |
| <b>Waldo County</b>                     | ) | <b>Findings of Fact and Order</b> |
| <b>Searsmont, Maine</b>                 | ) | <b>Air Emission License</b>       |
| <b>A-834-71-B-M</b>                     | ) | <b>Amendment #1</b>               |

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

## **I. REGISTRATION**

### **A. Introduction**

1. Churchill Coatings of Maine, LLC (Churchill Coatings) of Lewiston, Maine was issued Air Emission License A-834-71-A-N on August 29, 2002, permitting the operation of emission sources associated with their lumber coating facility.
2. Churchill Coatings has requested a minor revision to their license in order to reflect the change of location of the lumber coating facility from the Lewiston, Maine location to the old Crowe Rope building at 221 Belfast-Augusta East Road, in Searsmont, Maine.

### **B. Emission Equipment**

Churchill Coatings of Maine, LLC is applying to operate the following equipment:

#### **Process Equipment**

| <b><u>Equipment</u></b> | <b><u>Unit Type</u></b>      | <b><u>Production Rate</u></b> |
|-------------------------|------------------------------|-------------------------------|
| Coating Machine         | Roller Type Paint Applicator | Approximately 22,800 BF/day   |

### **C. Application Classification**

A modification at a facility with a licensed emissions increase of under (4) four TPY for any one regulated pollutant and under (8) eight TPY for total pollutants is determined to be a minor revision and not a major or minor modification. This amendment is determined to be a minor revision and has been processed as such.

## **II. BEST PRACTICAL TREATMENT (BPT)**

### **A. Introduction**

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Bureau of Air Quality regulations. BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Air Regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

### **B. Process Description**

The coating equipment permitted for the Lewiston site was never assembled due to problems acquiring the facility. Churchill Coatings of Maine, LLC, in conjunction with Robbins Lumber, has acquired the old Crowe Rope building at 221 Belfast-Augusta East Road, in Searsmont, Maine and plans to utilize the facility to operate essentially the same coating process as was permitted for the Lewiston site. The Lumber will be delivered to the site where it will then be inspected for knots. When required, the knots will be coated by hand with BIN shellac to seal the knots so that they will not show up after the final coating is applied. After the BIN has dried, the lumber will be fed through the coating machine. The coating machine coats all sides and the board ends. The boards are received at the discharge end of the coating machine and manually placed in racks for drying. The racks are positioned to allow for airflow through and around the lumber to minimize drying time. After the wood has dried it is then shipped offsite.

Chapter 129 of the Department's regulations establishes consistent requirements for testing evaluating and limiting the emissions of volatile organic compounds (VOC) and Hazardous air pollutants (HAP) from selected surface coating operations. The coating operations at the Churchill Coatings of Maine facility are not included in the selected coating operation categories in Chapter 129 of the Department's regulations, therefore, Chapter 129 is not applicable.

### **C. BIN Primer-Sealer**

BIN Primer-Sealer is an alcohol based, pigmented shellac used to prime surfaces before painting. BIN has a VOC content of approximately 4.6 lb/gal and a HAP content of 0.04 lb/gal and weighs approximately 9.8 lb/gal. Churchill Coatings of Maine, LLC is approximating their total annual VOC emissions from the use of BIN to be 2.75 tons/yr. This gives the facility an approximate annual usage rate of BIN of 1186 gallons per year.

D. Coating Machine

The Churchill Coatings of Maine, LLC coating machine is a simple tractor-roller and flushing and brushing process. Lumber is fed into a system of rollers that pull the lumber through a curtain of coating material. The flow of the coating material is controlled so that the application is a thick curtain of coating material. The flow of the lumber through the curtain of coating material is designed so that all portions of the lumber receive an even coating of material. The rollers then push the lumber through a set of brushes that brush off the excess coating material. The excess coating material is collected in a collection tank and recirculated through the system. Coating material is added to the machine manually in 25-gallon increments.

The coated lumber is received at the discharge end of the coating machine and manually placed into racks to dry. The lumber is held by the racks in a manner to allow air circulation through the lumber to decrease drying time. The coating machine and the drying racks are located on the first floor of the old Crowe Rope building.

Churchill Coatings of Maine, LLC plans to use Cabot 5259 Alkyd Oil-Base Primer or other similar primer. Cabot 5259 Alkyd Oil-Base Primer has a percent VOC concentration of 2.92 pounds of VOC per gallon of primer although Churchill Coatings of Maine may utilize coatings with a VOC content of as high as 4.58 pounds of VOC per gallon. The primer has coverage of 200 board feet per gallon and Churchill Coatings is approximating that they will use 300 gallons of primer per day from operation of the coating machine.

E. BACT

Churchill Coatings of Maine, LLC shall utilize an air scavenging system in the coating building that consists of two perforated duct work piping systems that vent to the outdoors via a 45 foot high exhaust stack. The system utilizes a 36,000 cubic foot per minute (CFM) fan to draw ambient air out of the first floor workspace. The system also utilizes a second 20,000 CFM fan to draw ambient air out of the second floor workspace. The fans blow the VOC and HAP laden air to the exhaust stack.

Visible emissions from the air scavenging exhaust shall not exceed 5% opacity based on a 6-minute block average.

The regulated pollutants associated with the coating process are VOCs and HAPs. Churchill Coatings of Maine, LLC agrees to accept total annual VOC emissions limits of 49.9 Tons/yr based on a twelve month rolling total and total annual HAP emissions limits of 9.9 tons per year of any single HAP and 24.9 tons per year of any combination of HAPs based on a twelve month rolling total.

To demonstrate compliance with VOC and HAP emissions limits, Churchill Coatings of Maine, LLC shall maintain a record of coating material use. The record shall include dates of coating operations, type of coatings used, volume of coatings used and VOC and HAP content of the coatings based on MSDS. The record shall be maintained monthly as well as a twelve-month rolling total. For the purposes of this license, the volume of coating used shall be equal to the amount of coatings verified to have been purchased by purchase receipts minus the amount of coatings that remain in inventory.

#### F. Fuel Burning Equipment

The old Crowe Rope building utilizes a 0.8 MMBtu/hr propane fired heating system as a heat source for the building. The heating system is below the 1.0 MMBtu/hr threshold for being considered a significant activity, therefore, the emissions resulting from the operations of the heating system will not be considered in determining total facility PTE (potential to emit) and the space heaters are mentioned in this license for inventory purposes only.

#### G. Annual Facility Emissions

Churchill Coatings of Maine, LLC shall be restricted to the following annual emissions, based on a 12-month rolling total:

**Total Allowable Annual Emission for the Facility**  
(used to calculate the annual license fee)

| <u>Pollutant</u> | <u>Tons/Year</u> |
|------------------|------------------|
| VOC              | 49.9             |
| Individual HAP*  | 9.9              |
| Total HAPs*      | 24.9             |

\* HAPs are identified by the EPA in regulations pursuant to Section 112(b) of the Clean Air Act (CAA).

### III. AMBIENT AIR QUALITY ANALYSIS

According to Maine Regulations Chapter 115, the level of air quality analyses required for a minor source shall be determined on a case-by case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source.

### ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-834-71-B-M subject to the following conditions:

**The following shall replace Condition (16) of Air Emission License A-834-71-A-N:**

(16) VOC Emissions

- Churchill Coatings of Maine, LLC shall not exceed total annual emissions of 49.9 tons per year of VOCs, 9.9 tons per year of any single HAP or 24.9 tons per year of any combination of HAPs from coating processes at the Searsmont, Maine facility.
- To demonstrate compliance with VOC and HAP emissions limits, Churchill Coatings of Maine, LLC shall maintain a record of coating material use. The record shall include dates of coating operations, type of coatings used, volume of coatings used and VOC and HAP content of the coatings based on MSDS. For the purposes of this license, the volume of coating used shall be equal to the amount of coatings verified to have been purchased through purchase receipts minus the amount of coatings that remain in inventory.
- The coating material use record shall be maintained monthly as well as a twelve-month rolling total.
- Visible emissions from the air scavenging exhaust shall not exceed 5% opacity based on a 6-minute block average.

Churchill Coatings of Maine, LLC  
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Searsmont, Maine  
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Findings of Fact and Order  
Air Emission License  
Amendment #1

(22) This amendment shall expire concurrently with Air Emission License A-834-71-A-N.

DONE AND DATED IN AUGUSTA, MAINE THIS                      DAY OF                      2003.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
DAWN R. GALLAGHER, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: April 1, 2003

Date of application acceptance: April 1, 2003

Date filed with the Board of Environmental Protection: \_\_\_\_\_

This Order prepared by, Peter G. Carleton, Bureau